REMARKS

Claims 1, 10, and 19 are amended, no claims are canceled, and no claims are added; as a result, claims 1-24 are now pending in this application.

No new matter has been introduced through the amendments to claims 1, 10, and 19. In claims 1 and 10, the subject matter previously provided in the preambles of each of these claims as originally filed has merely been moved to the body of these claims. Claim 10 was also amended to add the phrase "a memory on" before the phrase "a network interface" in the preamble of claim 10. Support for the amendments to claims 1, 10, and 19 may also be found throughout the specification, for example but not limited to, the specification at page 17, line 4, through page 22, line 11, and in Fig. 6 as originally filed.

Objection to the Claims

Claim 10 was objected to because of the following informalities as stated in the Office Action: "The limitation 'computer program stored in a network interface' is unclear."[1] Applicants have amended claim 10 as suggested by the Examiner, and thus believe the amendments overcome this objection to claim 10. Applicants therefore respectfully request withdrawal of this objection, and allowance of claim 10.

§101 Rejection of the Claims

Claims 1-18 were rejected under 35 U.S.C. § 101 as lacking patentable utility. Applicants respectfully traverse the rejection of claims 1-18.

Applicants submit that claims 1-18 include statutory subject matter under 35 U.S.C. § 101. For example, but not limited to this example, the body of independent claims 1, as now amended, includes,

> **tracking packet sequence numbers** of request packets and
> response packets of transactions transferring data to or from a
> network interface, said method including,
> > for every request packet transmitted by the network interface,
> > > writing the packet sequence number to a location in
> > > a circular send queue pointed to by a write pointer and

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[1] *See* the Office Action at page 3.

> setting a valid bit at said location, wherein the valid bit is
> indicative of whether at least one response is expected;
>> incrementing the write pointer if the packet is a read
> request packet or clearing a read indicator at the location in
> the circular send queue pointed to by the write pointer if the
> packet is not a read request packet; and
> for every response packet received by the network interface,
>> checking the packet sequence number of the
> response packet against the packet sequence number stored
> at a location in the circular send queue pointed to by the
> read pointer of the circular send queue. (Emphasis added).

The subject matter previously in the preamble of claim 1 is now included in the body of claim 1, and thus provides subject matter that must be considered in the interpretation of claim 1.

Applicants believe that the language of claim 1 is clearly directed to statutory subject matter under 35 U.S.C. § 101, both before and after this amendment. By way of example, and not by way of limitation, the recitations of claim 1 describe tracking packet sequence numbers of request packets and response packets for transactions transferring data to or from a network interface, which produces a concrete, useful, and tangible result related to the field of network interfaces transferring data between a host processing device and a network connection.

Applicants respectfully submit that upon reading the specification and claims of the present patent application, one would see that the present invention has practical application in the technological arts. The claims do not describe merely functional descriptive material, non-functional descriptive material, or a natural phenomenon. Attention is directed to the specification of the present application, which states,[2]

> "A network interface controller (NIC) generally acts as the
> communication intermediary between a network and a host
> processing system."

Further, the specification of the present application also states,[3]

> "Furthermore the data packets must be tracked in the NIC."

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[2] *See* the specification of the present application at page 2, lines 11-12.
[3] *See* the specification of the present application at page 3, line 9.

Thus, **tracking packet sequence numbers** of request packets and response packets of transactions transferring data to or from a network interface, as recited for example in claim 1, provides a useful, concrete, and tangible result. The tracking of packet sequence numbers in and of itself provides statutory subject matter under 35 U.S.C. § 101. Further, claim 1 relates to both request packets *and* response packets. The fact that dependent claims 3 and 4 provide additional subject matter related at least to response packets does not render the subject matter of claim 1 non-statutory under 35 U.S.C. § 101, as suggested by the Office Action.[4] Further, the inclusion of the subject matter of claims 3 or 4 is not necessary or required in order to have claim 1 include statutory subject matter under 35 U.S.C. § 101.

In a further example of statutory subject matter under 35 U.S.C. § 101, independent claim 10 as now amended includes,

> **tracking packet sequence numbers** of request packets and response packets of transactions transferring data to or from said network interface, said method including, for every request packet transmitted by the network interface. . . . (Emphasis added).

For reasons analogous to those stated above with respect to claim 1, Applicants believe that the language of claim 10 is clearly directed to statutory subject matter under 35 U.S.C. § 101, both before and after this amendment

Claims 2-9 depend from claim 1, and claims 11-18 depend from claim 10. Therefore, dependent claims 2-9 and 11-18 include all of the subject matter included in the claim from which they depend. For at least the reasons stated above with respect to claims 1 and 10, dependent claims 2-9 and 11-18 include statutory subject matter under 35 U.S.C. § 101.

Applicants further respectfully submit that the rejection of claims 1-18 fails to meet the burden for establishing a *prima facie* case to support the conclusion that the claims are directed to non-statutory subject matter. Therefore, Applicants respectfully traverse the non-statutory subject matter rejection of claims 1-18 under 35 U.S.C. § 101, and request withdrawal of this rejection, and allowance of claims 1-18.

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[4] *See* the Office Action at page 3, first paragraph.

§102 Rejection of the Claims

Claims 19-24 were rejected under 35 U.S.C. § 102(e) as being anticipated by Dobecki

(U.S. 6,611,879). Applicants do not admit that Dobecki is prior art and reserve the right, as

provided for under 37 C.F.R. 1.131, to "swear behind" Dobecki at a later time. However,

Applicants do not believe that swearing behind Dobecki at this time is necessary, as the claims

rejected under this 35 U.S.C. § 102(e) rejection are distinguishable over Dobecki.

Applicants respectfully traverse the rejection of claims 19-24.

Claims 19-24 are not anticipated by Dobecki because Dobecki fails to disclose all of the

subject matter included in claims 19-24, in as complete detail as is contained in claims 19-24,

and as arranged in claims 19-24.[5] For example, claim 19 as now amended recites,

> "a send queue engine connected to the send queue context
> memory, the transmitter and the receiver, wherein the send queue
> engine is connected to the send queue context memory by a first
> connection, and **the send queue context memory is connected to
> both the transmitter and the receiver through the first
> connection and through the send queue engine**; and
> a receive queue engine partitioned from the send queue
> engine and connected to the receive queue context memory, the
> transmitter and the receiver, wherein the receive queue engine is
> connected to the receive queue context memory by a second
> connection separate from the first connection, and **the receive
> queue context memory is connected to both the transmitter
> and the receiver through the second connection and through
> the receive queue engine**." (Emphasis Added).

Thus, claim 19 includes, "wherein the send queue engine is connected to the send queue

context memory by a first connection, and the send queue context memory is connected to both

the transmitter and the receiver through the first connection and through the send queue engine."

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[5] Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *W. L. Gore & Assocs. v. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, A[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP ' 2131.

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For at least the reasons stated below, Dobecki fails to disclose this subject matter, and fails to disclose this subject matter as arranged in claims 19 in as complete detail as contained in claim 19.

In contrast to claim 19, Dobecki discloses a "packetize portion 428P"[6] connected to a "transmit data buffer 422,"[7] the transmit data buffer 422 connected to a "DMA transmitter 418."[8] The DMA transmitter 418 is connected to CPU bus 317. Applicants do not admit that any the structure marked with any of these reference numbers, as shown in Fig. 7 of Dobecki, disclose the subject matter of claim 19, as suggested in the Office Action.[9] Even if some correspondence could be found between the claimed subject matter and the blocks indicated by the above mentioned reference numbers as shown in FIG. 7 of Dobecki, and as relied upon by the Office Action, Dobecki's blocks are not arranged as required by claim 19. For example, FIG. 7 of Dobecki fails to disclose a "send queue engine is connected to the send queue context memory by a first connection, and **the send queue context memory is connected to both the transmitter and the receiver through the first connection and through the send queue engine**," as required by claim 19. (Emphasis added).

In a further example of subject matter included in claim 19 and not disclosed by Dobecki, claim 19 also includes, "wherein the receive queue engine is connected to the receive queue context memory by a second connection separate from the first connection, and the receive queue context memory is connected to both the transmitter and the receiver through the second connection and through the receive queue engine."

In contrast to claim 19, Dobecki discloses a "de-packetizer portion 428D"[10] connected to a "receive data buffer 424,"[11] the receive data buffer 424 connected to a "DMA receiver 424."[12] The DMA receiver 424 is connected to CPU bus 317. Applicants do not admit that the structure marked with any of these reference numbers, as shown in Fig. 7 of Dobecki, disclose the subject

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[6] *See e.g.* Dobecki at column 16, line 66.

[7] *See e.g.* Dobecki at column 16, line 56.

[8] *See e.g.* Dobecki at column 16, lines 56-57.

[9] *See* page 4 of the Office Action.

[10] *See e.g.* Dobecki at column 16, line 66.

[11] *See e.g.* Dobecki at column 16, line 57.

[12] *See e.g.* Dobecki at column 16, lines 52. Applicants note that Dobecki uses reference number "424" in referring to both the "receive data buffer" and the "DMA receiver" in both the written description and in FIG. 7.

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matter of claim 19, as suggested in the Office Action.[13] Even if some correspondence could be found between the claimed subject matter and the blocks indicated by the above mentioned reference numbers as shown in FIG. 7 of Dobecki, and as relied upon by the Office Action, Dobecki's blocks are not arranged as required by claim 19. For example, FIG. 7 of Dobecki fails to disclose "wherein the receive queue engine is connected to the receive queue context memory by a second connection separate from the first connection, and **the receive queue context memory is connected to both the transmitter and the receiver through the second connection and through the receive queue engine,**" as required by claim 19. (Emphasis added).

In addition, although claims 22-24 were included in the statement of the rejection under 35 U.S.C. § 102(e), the Office Action lacks any discussion showing how any portion of Dobecki discloses the subject matter of claims 22-24. Without such a showing, the Office Action fails to meet its burden of establishing a *prima facie* case of anticipation with respect to claims 22-24.

For at least the reasons stated above, Dobecki fails to disclose all of the subject matter included in claims 19-24, in as complete detail as is contained in claims 19-24, and as arranged in claims 19-24, and so claims 19-24 are not anticipated by Dobecki. Thus, the 35 U.S.C. §102(e) rejection of claims 19-24 cannot stand. Applicants respectfully request reconsideration and withdrawal of the rejection, and allowance of claims 19-24.

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[13] *See* page 4 of the Office Action.

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Conclusion

Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney (612-371-2132) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexendria, VA 22313-1450 on this 22nd day of November 2006.

Amy Moriarty

Name

Signature